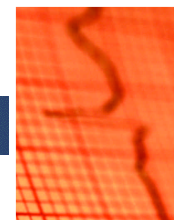


Digital Wrist Blood Pressure Monitor

Automatic Blood Pressure Monitor



6015

Instruction Manual



PLEASE NOTE:

THIS MEDICAL INSTRUMENT MUST BE
USED ACCORDING TO INSTRUCTIONS
TO ENSURE ACCURATE READINGS.

Questions?

Call ADC toll free at 1-800-232-2670



American Diagnostic Corporation
55 Commerce Drive, Hauppauge, New York 11788
1-800-232-2670
www.adctoday.com

Part #93-6015-00


American Diagnostic Corp.

6015 Automatic Wrist Blood Pressure Monitor

Table of Contents

1. Introduction

2. Important Information About Blood Pressure and Its Measurement

- 2.1 What is Blood Pressure?
- 2.2 What is a Normal Blood Pressure?
- 2.3 What Influences Blood Pressure?
- 2.4 Does Blood Pressure Vary?
- 2.5 What is Hypertension?
- 2.6 Can Hypertension be Controlled?
- 2.7 Why Measure Blood Pressure at Home?
- 2.8 How is Blood Pressure Measured?
- 2.9 How Should I Record My Blood Pressure?

3. Components of Your Blood Pressure Monitor

4. Setting Up Your Blood Pressure Monitor

- 4.1 Inserting the Batteries
- 4.2 Reading the Display
- 4.3 Icons

5. The Measurement Procedure

- 5.1 Applying the Cuff
- 5.2 Correct Measurement Posture
- 5.3 Measurement Procedure
- 5.4 Memory – Recalling Values
- 5.5 Clearing the Memory

6. Troubleshooting

7. Care and Maintenance

8. Technical Specifications

9. Warranty

10. How to Contact Us

9. WARRANTY

The blood pressure monitor (6015) is warranted for **5 years** from date of purchase. This guarantee includes the instrument and the cuff. The warranty does not apply to damage caused by improper handling, accidents, improper use of the device, or alterations made to the instrument by third parties.

The warranty is honored only after the unit has been registered at www.adctoday.com.

10. HOW TO CONTACT US

To register your product and obtain further detailed user information about our products and services visit us at:

www.adctoday.com

and follow the links.

For questions, comments, or suggestions
call us toll free at:

1-800-232-2670



American Diagnostic Corporation

55 Commerce Drive, Hauppauge, New York 11788

Telephone: 631-273-9600 • Fax: 631-273-9659

Email: service@adctoday.com

8. TECHNICAL SPECIFICATIONS

Weight:	.69 lbs. / 125 g (without batteries)
Size:	3.75" (L) x 4.25" (W) x 4.25" (H) 79mm (L) x 72mm (W) x 71mm (H)
Storage temperature:	–10°C to 60°C (14°F - 140°F)
Storage humidity:	10% to 95% relative humidity maximum
Operation temperature:	5°C to 45°C (41°F to 113°F)
Operation humidity:	40% to 85% relative humidity maximum
Display:	LCD (Liquid Crystal Display)
Measuring method:	Oscillometric
Pressure sensor:	Semi-conductor
Measuring range:	
SYS/DIA:	20 to 280 mmHg
Pulse:	40 to 180 per minute
Cuff pressure display range:	20–280 mmHg
Memory:	Automatic storage
Measuring resolution:	1 mmHg
Accuracy:	
Pressure	Within ± 3 mmHg
Pulse	$\pm 5\%$ of the reading
Power source:	2 AAA (Alkaline batteries) 1.5 V

1. INTRODUCTION

1. Introduction

Congratulations on your purchase of the ADC® 6015 ADvantage™ Blood Pressure Monitor.

In hospitals and physician's offices throughout the world, where accuracy and dependability are critical, ADC® professional diagnostic products are the instruments of choice.

Now you, too, can enjoy the benefits of ADC® engineering and quality in the home. This feature rich instrument was designed to simplify the measurement of blood pressure and pulse rate at home and deliver consistent, dependable results.

Your ADC® ADvantage™ blood pressure monitor is a fully automatic digital blood pressure measuring device for use on the wrist. It enables very fast and reliable measurement of the systolic and diastolic blood pressure as well as the pulse by way of the oscillometric method. This device offers clinically proven accuracy and has been designed to be user friendly.

Read this booklet thoroughly before attempting to use your new ADC® ADvantage™ Digital Blood Pressure Monitor.

Remember...

- Only a health care professional is qualified to interpret blood pressure measurements. This device is NOT intended to replace regular medical checkups.
- It is recommended that your physician review your procedure for using this device.
- Blood pressure readings obtained by this device should be verified before prescribing or making adjustments to any medications used to control hypertension. Under no circumstances should YOU alter the dosages of any drugs prescribed by your doctor.
- This monitor is intended for use by adults only. Consult with a physician before using this instrument on a child.
- In cases of irregular heartbeat (Arrhythmia), measurements made with this instrument should only be evaluated after consultation with your doctor.
- Familiarize yourself with the section titled "About Blood Pressure". It contains important information on the dynamics of blood pressure readings and will help you to obtain the best results.

NOTE! This device contains sensitive electronic components. Avoid strong electrical or electro-magnetic fields in the direct vicinity of the device (e.g. mobile telephones, microwave ovens) during use. These can lead to erratic results. Do not attempt to service or repair this device yourself. Should a malfunction occur, refer to the back of this booklet for service information.

2. ABOUT BLOOD PRESSURE

2.1. What is Blood Pressure?

Simply put, arterial blood pressure is the force of blood exerted against the walls of the arteries. There are two components to blood pressure - systolic and diastolic pressure. Systolic, the higher pressure, occurs during contraction of the heart. Diastolic, the lower pressure, occurs when the heart is at "rest."

Your level of blood pressure is determined in the circulatory center of the brain and adjusts to a variety of situations through feedback from the nervous system. To adjust blood pressure, the strength and frequency of the heart (Pulse), as well as the width of circulatory blood vessels is altered. Blood vessel width is effected by fine muscles in the blood vessel walls.

Blood pressure is traditionally measured in millimeters of mercury (mmHg). It is recorded as systolic/diastolic. For example, a systolic of 120 and diastolic of 80 would be recorded 120/80.

Blood pressure is a dynamic vital sign - one that changes constantly and throughout the day. A person's "resting" blood pressure is the pressure that exists first thing in the morning while a person is still at rest and before consumption of food or drink.

2.2. What is a Normal Blood Pressure?

A systolic pressure of less than 120mmHg and a diastolic pressure of under 80mmHg are recognized as normal by the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, 2003.

Note: Blood pressure does increase with age, so you must check with your doctor to find out what is "normal" for you! Even with normal blood pressure values, a regular self-check with your blood pressure monitor is recommended. You can detect possible changes in your values early and react appropriately. If you are undergoing medical treatment to control your blood pressure, keep a record of values along with time of day and date. Show these values to your doctor. Never use the results of your measurements to independently alter the drug doses prescribed by your doctor.

2.3. What Influences Blood Pressure?

Blood pressure is influenced by many factors including age, weight, physical conditioning, past illness, time of day, altitude, activity, and climate, to name just a few. In general, blood pressure is lower in the morning and increases throughout the day. It is lower in warm weather, and higher in cold weather. Physical activity can have a significant short term impact on blood pressure. Work, exercise, smoking, eating, drinking - even talking, laughing, or crying will all affect a person's blood pressure.

Your diet, including beverages containing caffeine or alcohol, may affect blood pressure. Emotional stress can have a dramatic impact on your blood pressure. Even repeated blood pressure measurements taken without adequate rest between readings will alter your blood pressure as the vessels in your arm engorge with blood.

7. CARE AND MAINTENANCE

1. This unit contains sensitive components, avoid extreme temperatures, humidity, and direct sunlight.

2. Avoid dropping the main unit, or subjecting it to severe vibration, and protect it from dust.

2. Clean the blood pressure monitor body and the cuff carefully with a slightly damp, soft cloth. Do not press. Do not bend the pre-formed cuff inside out. Do not wash the cuff or use chemical cleaners on it.

3. Leaky batteries can damage the unit. Remove the batteries when the unit is not used for a long period of time. (will clear memory).

4. Do not press the ON/OFF/START key when the cuff is not placed around the wrist.

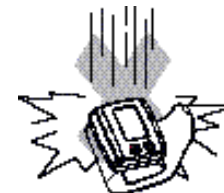
5. This unit should not be operated by children.

6. Do not disassemble the main unit or cuff.

7. If the unit is stored near freezing temperatures, allow it to acclimate at room temperature before use.

8. The 6015 is not field serviceable. You should not use any tool to open the device, nor should you attempt to adjust anything inside the device. If you have any problems, contact ADC®.

9. For users diagnosed with common arrhythmia (atrial or ventricular premature beats or atrial fibrillation), diabetes, poor circulation of blood, kidney problems, or for users who have suffered from stroke, this device may not be suitable. Do not use this device on a person who is unconscious.



6. TROUBLESHOOTING

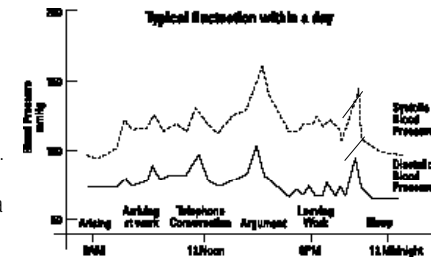
If any abnormality should arise during use, check the following points.

Symptom	Check Point	Correction
No display when the ON/OFF/START key is pressed	Have the batteries run down?	Replace batteries with two new "AAA" alkaline batteries
	Have the battery polarities been positioned correctly?	Re-insert the batteries in the correct positions
EE mark shown on display or the blood pressure value is displayed excessively low (high)	Is the cuff placed correctly?	Measure again quietly and keep still.
	Did you talk or move during measurement?	Wrap the cuff properly so that it is positioned correctly.
	Did you shake the wrist with the cuff on?	
E1 mark shown on display	Is the cuff placed correctly?	Measure again quietly and keep still. Do not inflate the cuff off your arm

Many of these influences are only temporary or short term, though chronic (long term) exposure to some factors may result in permanently elevated blood pressure levels.

2.4. Does Blood Pressure Vary?

Constantly. An individual's blood pressure varies greatly on a daily and seasonal basis. It changes throughout one's lifetime. It is not uncommon for systolic pressure to vary by 40mmHg or more throughout the course of a single day! While generally not as volatile, diastolic pressure can still vary significantly. In hypertensive individuals, variations are even more pronounced. Normally, blood pressure is at its lowest during sleep and rises in the morning and throughout the day. The chart (right) illustrates the fluctuations that could occur in a typical day.



2.5. What is Hypertension?

Hypertension (high blood pressure) is elevated systolic or diastolic levels. In 90 to 95 percent of the diagnosed cases, the specific causes are unknown, although the condition is often linked with family history, and lifestyle. This is referred to as essential hypertension. In the remaining cases, high blood pressure is a symptom of an underlying, often treatable condition, which if corrected, may normalize blood pressure. This less common type is known as secondary hypertension.

Hypertension, if left untreated, may contribute to kidney disease, heart attack, stroke, or other debilitating illnesses. The following standards for assessment of high blood pressure (with out regard to age) have been established by the Joint National Committee, 2003.

Range Classifications	Systolic Blood Pressure	Diastolic Blood Pressure	Precaution Measures
Normal	<120	<80	Monitor regularly
Pre-hypertension	120 - 139	80 - 99	Contact your physician
HYPERTENSION			
Stage 1 (Moderate)	140 - 159	90 - 99	Contact your physician Immediately
Stage 2 (Severe)	160+	100+	Contact your physician URGENTLY

(JNC-7 report: Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure / 2003)

Remember only a physician is qualified to interpret the readings obtained from your blood pressure monitor. No attempt should ever be made at self-diagnosis or treatment.

2.6. Can Hypertension be Controlled?

Although essential hypertension cannot be cured, it can usually be controlled by altering lifestyle (including diet), adopting a program of exercise, stress management, and, where necessary, with medication under a doctor's supervision.

To help reduce the risk of hypertension, or keep it under control, the American Heart

Association (AHA) recommends the following:

- Don't smoke
- Reduce salt and fat intake
- Maintain proper weight
- Exercise regularly
- Have regular physical checkups

2.7. Why Measure Blood Pressure at Home?

Clinical studies have shown improved detection and treatment of hypertension when regular home blood pressure monitoring is done in consultation with a physician.

Blood pressure measured in a doctor's office or hospital setting may cause anxiety and lead to an elevated reading - a condition referred to as "white coat hypertension."

Home measurements generally reduce the "outside" influences on blood pressure readings, and can provide a more comprehensive and meaningful blood pressure history.

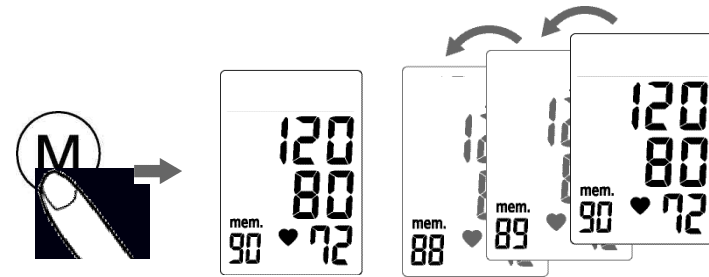
Important Note: While it is important to keep an accurate record of your blood pressure measurements, don't be overly concerned by the results of any one measurement. Individual results may be influenced by spiking of your pressure due to diet, anxiety, or mis-measurement resulting from excessive arm movement, or misapplication of the cuff. Many readings taken at the same time each day give a more comprehensive blood pressure history. Always be sure to note the date and time when recording blood pressure and pulse measurements. For best results, and with time permitting, 3 successive measurements may be taken daily. Make sure to allow at least 5 minute intervals between measurements. Discard any reading that appears suspect and record the average of the remaining readings.

2.8. How is Blood Pressure Measured?

Health care professionals traditionally use a device known as a sphygmomanometer along with a stethoscope - essentially a professional version of the very same instrument you have purchased. The sphygmomanometer is a system consisting of an inflatable bladder contained within a cuff, inflation bulb with air control valve, and pressure measuring manometer (gauge). The gauge may be mechanical or mercurial.

5.4. Recalling Values from Memory

1. To read memory values, press the **RECALL** key while the unit is OFF. The memory values will be shown on the LCD. The last measurement will be shown first. Every new press of the **RECALL** key will display one prior stored value.



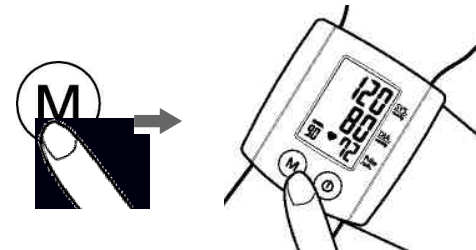
5.5. Clearing the Memory

You can erase all the memories stored by one of 2 methods:

- Remove the batteries
- Press the **MEMORY RECALL** key for more than 5 seconds

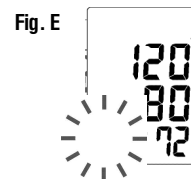
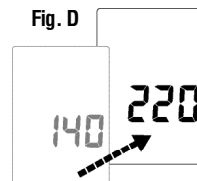
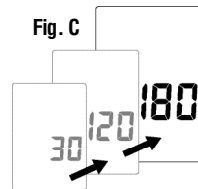
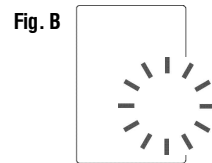
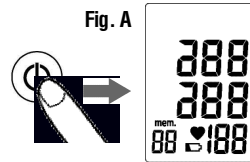
NOTE:

The data in the memory will not be lost even when the Blood Pressure Monitor is switched off, as long as the batteries are in place.



5.3. Correct Measurement Procedure

1. Place the cuff on the wrist. Press the **ON/OFF/START** key. All digits will light up, checking the display functions. The automatic self-check will be complete after about 2 seconds (**Fig. A**).
2. After all symbols appear, the display will show a blinking "0". When it stops blinking, the monitor is "ready to measure" (**Fig. B**).
3. Once the monitor inflates the cuff to approximately 180 mmHg, measurement will begin (**Fig. C**).
NOTE: The monitor will re-inflate automatically to approximately 220mmHg if the system detects that your body needs more pressure to accurately obtain your measurement (**Fig. D**).
4. When measurement is completed, systolic, diastolic, and pulse will be shown simultaneously and be saved automatically in the memory system. Up to 90 measurements can be saved in memory (**Fig. E**).
5. Press the **ON/OFF/START** key to turn the monitor off. If no key is pressed, the monitor will automatically shut off in 60 seconds.



The cuff is wrapped around the limb and inflated to constrict blood flow to the artery. As pressure is released from the cuff through the deflation valve, blood flow returns to the artery producing pulse beats known as Korotkoff sounds, which are detected with the stethoscope. Systolic pressure is recorded at the onset of these sounds. Diastolic pressure is generally recorded when the sounds disappear (when blood flow to the artery returns to normal).

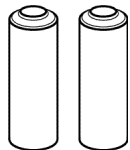
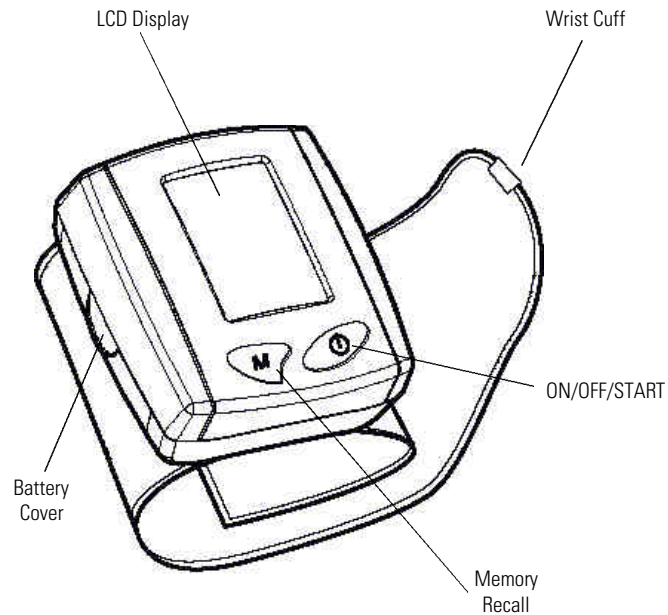
2.9. How should I record my blood pressure?

Record by setting up a simple chart in a spiral bound notebook as shown below, or use the included record book.

Date	Time	Reading	Pulse
4/24/98	7:50AM	128/83	72
4/25/98	8:00AM	135/77	77
4/26/98	7:45AM	130/75	71
4/27/98	2:00PM	153/89	80

If you like you can add a column for comments about your condition at the time of measurement, or a listing of any factors that may have influenced your readings (such as "had a cold", or "just returned from vacation"). For best results, and with time permitting, 3 successive measurements may be taken daily. Make sure to allow at least 5 minute intervals between measurements. Discard any reading that appears suspect and record the average of the remaining readings. If this method is used, be sure to note that the readings are averaged.

3. COMPONENTS OF YOUR BLOOD PRESSURE MONITOR



2 "AAA" 1.5V alkaline batteries
included in the carry case

5.2. Correct Measurement Posture

1. Place your elbow on a table so that the cuff is at the same level as your heart (**Fig. A**).

NOTE:

Your heart is located slightly below your armpit, a bit to the left of the middle of your chest (**Fig. B**). Relax your entire body, especially the area between your elbow and fingers.

2. If the cuff is not at the same level as your heart or if you cannot keep your arm completely still throughout the reading, use a soft object such as a folded towel to support your arm (**Fig. C**).

Do not allow hard objects to come in contact with the wrist cuff.

3. Turn your palm upwards.
4. Sit upright in a chair, relax for 5 minutes before starting measurement.
5. Avoid leaning back while the measurement is being taken (**Fig. D**).



Fig. A

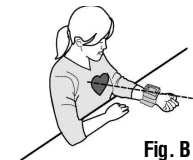


Fig. B

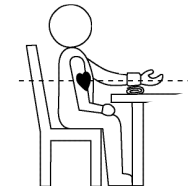


Fig. C



Fig. D

5. MEASUREMENT PROCEDURE

5.1. Applying the Cuff

1. Remove all watches, jewelry, etc. prior to attaching the wrist monitor. Clothing sleeves should be rolled up and the cuff should be wrapped on bare skin for correct measurements.
2. Apply cuff to your wrist with palm facing upward (**Fig. A**).
3. Make sure the edge of the cuff is about 1/2" (1.27cm) from your palm (**Fig. B**).
4. In order to ensure accurate measurements, fasten the hook & loop closure securely around your wrist so there is no extra space between the cuff and the wrist (**Fig. C**).

If the cuff is not wrapped tightly enough, the measurement values will be false.

5. If your physician has diagnosed you with poor circulation in your left arm, carefully place the cuff around your right wrist (**Fig. D**).

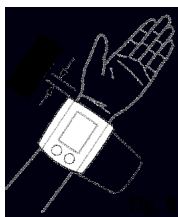
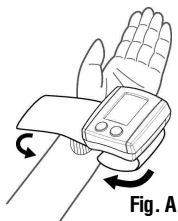
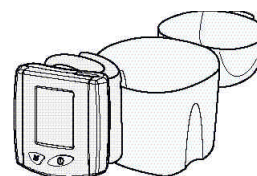


Fig. D

COMPONENTS OF YOUR BLOOD PRESSURE MONITOR (cont'd)



Integral Carry Case

4. SETTING UP YOUR BLOOD PRESSURE MONITOR

4.1. Inserting Batteries

1. Place your thumb on the side of the battery cover. Push the battery cover in the direction of the cuff to open. (**Fig. 1**)
2. Install lower battery first in the bottom position with the battery ribbon underneath. (Battery Type: 2 Alkaline "AAA", 1.5V). (**Fig. 2**)
3. Place the other battery in and pull the battery ribbon over it. (**Fig. 3**)
4. Replace the cover by placing the end tabs of the battery cover in the slots on the top of the battery compartment (**Fig. 4.1**). Click in the other end to secure battery cover (**Fig. 4.2**).

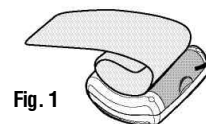


Fig. 1

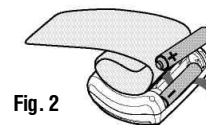


Fig. 2

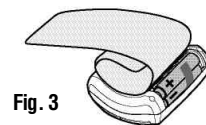


Fig. 3

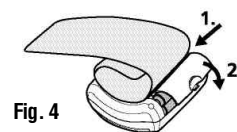


Fig. 4

Replace batteries if:

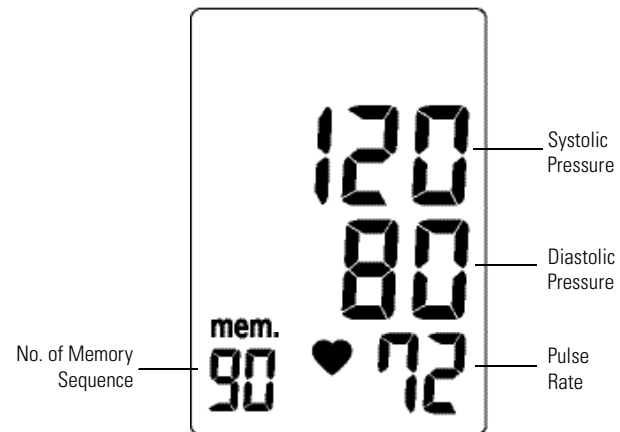
- The weak battery mark appears in the display.
- Nothing appears in the display when power is switched on.

As the supplied batteries are for test only, they may be discharged earlier than batteries you buy in stores. Replace batteries in pairs. Remove batteries when unit is not used for extended periods of time.

NOTE: Removing the batteries will erase the memory.

NOTE: ⚠ Batteries are hazardous waste. Do not dispose of them in household garbage.

4.2. Reading the Display



4.3. Icons

mem.	Memory Mark:	Shows the number of stored measurements.
♥	Pulse Mark:	Shows the pulse rate per minute.
🔋	Weak Battery Mark:	Appears when batteries should be replaced.
EE	Error Mark:	Appears when an error occurred during measurement.